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AUTHOR	Wesolowski, Zdzislaw P.
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ABSTRACT

The implementation of a Planning, Budgeting and Evaluation System (PPBES) and a Management Information System (MIS) at Polk Community College will consider the needs, the objectives, and the priorities of the college. The tasks in the development and implementation of a PPBS system are: development of an implementation plan (specific tasks involved in the initial systems design, persons responsible for development, review, and approval, and a schedule), establishment of the responsibility of the Steering Committee (document institutional goals, develop program structure, identify program measures, develop information system, develop program planning and budget process, test simulation model, develop long-range plan format, and develop training seminars), establishment of the implementation Committee (PPBES Steering Committee, PPBES Task Force Committee, and the Management information System Task Force). The overall implementation plan, synopsis of major events, schedule of implementation of PPBES, and schedule of implementation of MIS are provided. (For related documents, see JC 740 024, 025, 027.) (DB)

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A PLAN FOR THE DEVELOPMENT AND IMPLEMENTATION OF PLANNING, PROGRAMMING, BUDGETING AND EVALUATION SYSTEM, AND MANAGEMENT INFORMATION SYSTEM*

BY

Zdzislaw P. Wesolowski, Director

1974

*A paper based on a practicum submitted to Nova University

JC 740 026

A Plan for the Development and Implementation of a Planning, Programming, Budgeting and Evaluation System (PPBES) and Management Information System (MIS) for Polk Community College.

INTRODUCTION

At the request of the Division of Community Colleges at the State Department of Education, Polk Community College will be responsible for development of a Planning, Programming, Budgeting and Evaluation System and a Management Information System. The College will have the autonomy to develop an implementation system which will represent the administrative structure, instructional programs and the College philosophy.

By legislative requirement, a system approach to college administration is mandated to complement the planning of budgets and long range studies with the Department of Education. It is hoped that a trial system will be developed for the 1973-74 budget year. The guidelines suggested by the Division of Community Colleges will be used to develop a comprehensive system, which when implemented will be compatible with other community colleges in the state of Florida.

A definition of PPBES and MIS is necessary in order to understand the technique that will be utilized to implement this plan. The system is more than a logical arrangement of functions performed on a college campus. Under this program the needs of the College will be identified, objectives and priorities established in order to reach the objectives and goals of Polk Community College. A College wide effort will be required in which we will

attempt to utilize all our resources in order to attain a unified plan of action. It is envisioned that in addition to the annual PPBES, a six year projection will be made to help us in long range planning.

In order that we may realize the above objectives a Management Information System (MIS) must be established to utilize the computer system to its greatest capacity. The PPBES and MIS is envisioned as a systematic approach to college administration.

It is envisioned by the Office of Management Information and Institutional Research that with the cooperation and participatory efforts of the members of PPBES and MIS committees, a realistic program structure for Polk Community College will be developed. Every suggestion from members of the College community will be considered when designing the system. We anticipate that when the system is completed, it will serve the whole community as a tool for management decision making.

The benefits derived from a systematic approach to management are many. It will result in an increase of communication in the College community and a deeper understanding of our functions and responsibilities. Accountability will be the end result because with such a tool for management decision making, we will be able to evaluate our progress and analyze our strength and weakness.

TABLE OF CONTENTS

		Page
A.	Definition of PPBES	1
B.	Development of an Implementation Plan	2
C.	Implementation Committee Structure	11
D.	Membership of Polk Community College PPBES and MIS Committee	13
E.	Overall Implementation Plan	14
F.	Synopsis of Major Events	15
G.	Schedule of Implementation of PPBES	16
H.	Schedule of Implementation of MIS	18

PLANNING, PROGRAMMING, BUDGETING AND EVALUATION OBJECTIVES

PLANNING

1. Select goals.
2. Identify needs of College publics in relation to services provided.
3. Identify resources required to fulfill College needs.

PROGRAMMING

1. Identify task force teams.
2. Define areas of responsibility of College personnel.
3. Define performance objectives for members of task force teams.
4. Define medias of communication.
5. Develop a computer based Management Information System for decision making.

BUDGETING

1. Develop a program budget
2. Account for use of College resources (people, facilities, supplies).
3. Relate resources to output.

EVALUATION

1. Define the scope of evaluation.
2. Relate outputs to objectives.

DEVELOPMENT OF AN IMPLEMENTATION PLAN

One of the early tasks in the development and implementation of a Planning, Programming, and Budgeting System at an institution is preparation of an Implementation Plan and Schedule. This document should describe the specific tasks involved in initial systems design, the persons responsible for development, review, and approval, and a schedule showing when each step should be concluded to assure implementation for the 1974-75 fiscal year.

The Implementation Plan should include a list of the participants who will be involved in implementation, as well as their specific responsibilities if this has not already been documented. The following paragraphs outline one organizational pattern for implementing the PPBE System.

1. Steering Committee

The responsibility of this group is to oversee and approve development of the system. As a group they will not have responsibility to design any of its components. Its membership will consist of:

A. President, Chairman
B. Assistant to the President
C. Planning Coordinator, Secretary
D. Dean of Instruction
E. Director of Services
F. Dean of Students
G. Faculty Representative
H. Non-instructional Representative
I. Student Representative
J. Other persons designated by the President

2. PPBES and MIS Coordinator

The responsibility of this person is to design and implement each component of the system with assistance from the Technical Task Force and other college staff members. He should, for example, develop the implementation plan, program structure, program measures, and test procedures for the simulation model.

3. MIS Task Force

This group is responsible for assisting the Planning Coordinator in the development of specific components of the system. This group should include persons with technical competence in:

a. Curriculum
b. Academic planning procedures
c. Data Processing
d. Information systems
e. Budgeting
f. Financial procedures and practices
g. Facilities planning and management

4. Program Planners - Program Classification Structure Level Task Force

These are persons assigned the responsibility of planning each component in the program structure (e.g., element, sector, category, or subprogram).

The sample Implementation Plan which follows concentrates on the tasks to be accomplished and the responsibilities of the above persons involved in initial implementation. A schedule is also included to illustrate the relationship of each task to the total system and to establish target dates for completion of specific components.

RESPONSIBILITY OF THE STEERING COMMITTEE

1. Document Institutional Goals

Goals are statements describing desired outcomes or necessary provisions to achieve desired outcomes which give general direction for the development of a college's programs. It is not intended to specify programs in detail or to be measurable in terms of quality or quantity of outcomes. The purpose of this task is to provide the broad framework for developing a program structure which is oriented to the goals of the college. The viability of the process of outcome accountability is dependent on developing a goal oriented structure. Objectives are statements specific in nature describing desired outcomes or necessary provisions to achieve desired outcomes expressed in measurable, time-bound terms.

The responsibility for this task is assigned to the Steering Committee. If broader involvement is desired, the President can appoint temporary members to assist in analyzing and writing the goal statements.

2. Develop Program Structure

This task involves the identification and classification of program elements according to the goals established for the college.

> A Program Element is a definable set of resources, technologies, and policies integrated through a set of activities to contribute directly to the achievement of a program objective in a measurable fashion. The activities of a Program Element cannot be subdivided and still be identifiable as a unit contributing to an objective;

therefore, it is the most disaggregate level in the program structure.

The task of identifying program elements will be assigned to the Coordinator, but he will utilize persons involved in each program area to identify activities and their relationship to the operation of the college. If program planners have been identified, they should develop definitions and goal statements for elements within their area of responsibility. The Coordinator will also be responsible for establishing the classification scheme for the program structure (and documenting the rationale). The Technical Task Force should be a sounding board during development of the structure.

It is important for the Coordinator to consider the program structure developed for system-wide community college planning in Manual One and the Program Classification Structure developed by NCHEMS. The closer the college structure coincides with these, the less cross-over will be necessary when reporting program information.

3. Identify Program Measures

This task will overlap with the development of the program structure. It involves the identification of quantitative indicators for each program element according to the following major categories:

1. Resources
2. Activity Level
3. Need for Services or Products Produced
4. Expenditures Incurred
5. Outcomes Achieved (or Planned)

Identification of program measures provides the basis for developing the information system since these data elements are needed to support analysis of historical data and to drive a simulation model. In other words, program measures form the data base for the management information system.

The responsibility for identifying the program measures is assigned to the Coordinator. He will seek assistance in this task from the Technical Task Force and Program planners assigned to each program component.

4. Develop Information System

Once the program measures are identified, the task of developing the information system is one of designing procedures and methods to collect, store, and report information along program lines. This involves developing a method of coding transactions or cross-walking data collected and stored along organizational lines to the program structure. For example, course data (or records) may be assigned a program structure code and organizational unit or department code. Expenditures, on the other hand, are identified with organizational units and are subsequently cross-walked from the accounting files to the program structure.

Development of a reporting system to provide information to the program planners is also an important task in developing the information system. The format and level of detail, or summary, of information which each planner needs is an important consideration.

The responsibility for this task is assigned to the Coordinator.

He should be assisted by the data processing staff and Technical Task Force.

5. Develop Program Planning and Budget Process

The purpose of this task is to develop a system to report, store, analyze, and summarize program plans developed for each component in the program structure. The following steps are involved:

1. Develop Program Planning forms and instructions
2. Establish schedule of dates for distribution and submission of planning forms
3. Outline responsibilities of program planners; e.g.,
   a. Review definitions in the program structure
   b. Review goals of program components
   c. Develop objectives for program components
   d. Estimate resource requirements for the Budget Year
   e. Define Resource Allocation Policies for the Budget Year and each out-year
   f. Complete Program Planning Forms
   g. Evaluate program plans
   h. Write issue papers or program memoranda based on evaluation and recommended program modification.

It is very important that this part of the PPBE System be well documented to provide guidelines for the program planners' activities.

The primary responsibility for developing this process resides with the Coordinator, but he should rely heavily on the assistance of the Technical Task Force.

6. Test Simulation Model

A key tool in the PPBE System is the simulation model or system. It is used to project the impact over a multi-year period of alternative program decisions on the expenditure of institutional resources. It may also be used to develop the college's program budget.

The Resource Requirements Prediction Model (RRPM) developed by NCHEMS or Cost Estimation Model (CEM) will be used initially since it is readily available to the college and inexpensive. The following steps should be taken to implement the model:

1. Familiarization with the logic and use of the model.
2. Development of test data to drive (input) the model. Every attempt should be made to obtain data which adequately represents the college expenditure.
3. Run the model using alternative data sets. The variance in data sets should be little so that the sensitivity of the model can be tested.
4. Analyze the outputs from the model.
5. Validate the model. Determine if the output closely represents the actual conditions which occurred due to the use of various data sets.

During the test phase, the model can be used as a training device for the college staff.

The Coordinator, Technical Task Force, and data processing staff will be responsible for conducting the tests of the model.

7. Develop Long Range Plan Format

The purpose of this task is to lay out the format for a Long Range Plan for the college. This document should clearly display the decisions related to achieving goals, as well as specify the objectives of each program over the multi-year period. The content of the plan should include:

1. Explanatory narrative
2. Statement of Goals
3. External Environmental Assumptions
4. Policies affecting multi-year plans
5. Historical operating and statistical data
6. Program Plan Objectives and Summaries
7. Revenue Forecasts and Assumptions
8. A Facilities Plan
9. A Long Range Plan Summary.

The Plan format should be developed by the Coordinator and approved by the Steering Committee.

8. Develop Training Seminars

This task involves development of a program to instruct program planners on the PPBE System and their role in its operation. Emphasis should be placed on the benefits of the system to the college, as well as the pay off to the individual planning units. It is important that the President and his staff be involved in conducting the seminar to re-emphasize their commitment to the new planning system and its role in college management decision making.

THE IMPLEMENTATION COMMITTEE

1. A College PPBES Steering Committee

The committee should be comprised of Administrative Staff Officers and faculty members. This group should have complete responsibility to develop and oversee the implementation of the system. It is requested that the membership consist of the following:

1. President
2. Assistant to the President
3. Coordinator of PPBES and MIS
4. Dean of Instruction
5. Director of Services
6. Dean of Students
7. Faculty representative
8. Non-instructional representative
9. President - Student Government
10. Other individuals recommended by the President

2. PPBES Task Force Committee
(Based on Program Classification Structure)

It is suggested that these committees be comprised of selected faculty members in both administrative and instructional areas. In order that a self-study can be made, the composition of a Technical Task Force Committee should include:

1. Division Chairmen
2. Department Heads (administrative and instructional)
3. Faculty members
4. Student representative (when appropriate)

3. The Management Information System Task Force will be responsible for the design of necessary data systems on a college-wide basis. It is imperative that this be accomplished by total participation of individuals representing areas which can input necessary data.

To establish a MIS system it is suggested that we construct a committee comprised of the following:

1. Coordinator of PPBES and MIS
2. Assistant to the President
3. Director of Computer Center
4. Director of Services representative
5. Dean of Students representative
6. Dean of Instruction representative
7. Faculty member
8. Other individuals recommended by the President

Suggested List of Members for the College PPBES

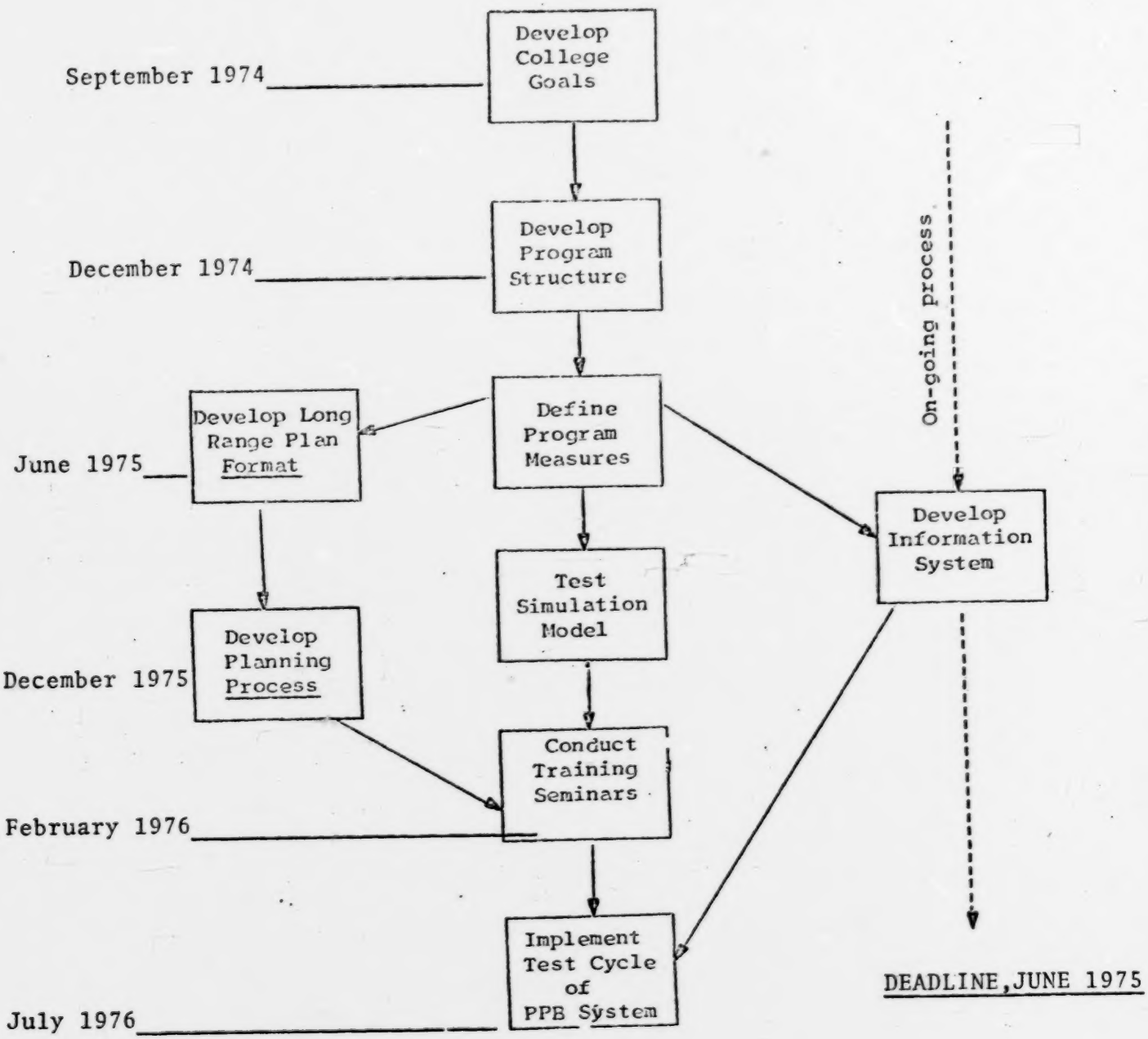
1. President Frederick T. Lenfestey, Chairman
2. Daniel J. Costello, Vice-Chairman
3. Clarence C. Holden
4. Robert L. Collins
5. William F. Taylor
6. Paul Wesolowski, Secretary
7. Shirley A. Sumner
8. Elsie M. Darnell
9. President - Student Government

Suggested List of Members for the Management Information Task Force Committee

1. Daniel J. Costello
2. Robert L. Collins
3. Larry Brown
4. John A. Gordon
5. Clyde A. Rodgers
6. Donald L. Evans, Chairman
7. Norman Dando
8. Eugene J. Redig
9. Paul Wesolowski, Secretary

POLK COMMUNITY COLLEGE PPBES & MIS

IMPLEMENTATION PLAN



SYNOPSIS OF MAJOR EVENTS IMPLEMENTING PPBES & MIS AT POLK COMMUNITY COLLEGE

GOALS	DEADLINE
1. Develop an implementation plan. Obtain approval of plans.	August 1973
2. Appoint PPBES Steering Committee & MIS Task Force Committee.	September 1973
3. Analyze present College system and determine needs and goals.	November 1973
4. Computerize the Business Office operations.	September 1973
5. Computerize the academic and instructional record system.	November 1973
6. Establish an MIS system. Appoint Task Forces.	September 1974
7. Test the PPBES and MIS.	November 1974
8. Program Implementation completed. Point of entry into pilot year of PPBES and MIS operations.	June 1975

SCHEDULE FOR IMPLEMENTATION OF PPBES

SYNOPSIS OF GOALS	ACTIVITY	DEADLINE
1. Implementation Plans approved	Develop the schedule of the project, carry out preliminary research, prepare the presentation of the schedule for approval.	September 1, 1973
2. Administrative Staff orientation	Organize information for workshops, conduct workshop, evaluate the results of workshops in PPBES and MIS.	October 1, 1973
3. Activate Planning Task Force Teams	Select and appoint College Task Force and Steering Committee. Train the Planning Task Force	November 1, 1973
4. Brief Task Force	Conduct training and briefing sessions with Steering Committee and Task groups.	November 15, 1973
5. Analyze College System	Investigate the current state of the College to determine and identify components, environment and group relationships.	March 1, 1974
6. Assess Needs and Goals	Investigate present information and the goals of the College, document tentative College goals.	April 1, 1974
7. Document the needs and goals of the College	Draft the official needs and goals, obtain consensus from the College community.	May 1, 1974
8. Pre-pilot year planning tasks completed	Investigate and define present programs and responsibilities.	June 1, 1974
9. Establish a classification system	Set-up a total Program Classification Structure which includes definitions, measures, activities, objectives, evaluation criteria, organizational relationships and responsibility.	July 1, 1974
10. Establish PPBES Model	Design the model for Polk Community College.	August 1, 1974

SYNOPSIS OF GOALS	ACTIVITY	DEADLINE
11. Install MIS and CEM	Complete and test the PPBES model with two subsystems, MIS to provide information data supply for PPBES and CEM to provide a means of predicting resource requirements for future years.	October 1, 1974
12. Test PPBES Model	Integrate subsystems, PCS, MIS, CEM and test the whole system with problems and conditions, debug the model and retest.	December 1, 1974
13. PPBES Model validation	Evaluate the model on the basis of real world needs and environment.	January 1, 1975
14. Design long-range plan format	Develop a format, content and arrangement for long-range reports.	February 1, 1975
15. Develop PPBES forms and procedures	Design effective forms and procedures for the whole PPBES operation.	March 1, 1975
16. Complete pre-pilot seminars	Conduct briefing and training to alert and mobilize the whole campus for the pilot year of PPBES and MIS.	April 1, 1975
17. Start Pilot year	Begin operations and coordinate information on a state-wide basis and on campus.	July 1, 1975

SCHEDULE OF IMPLEMENTATION OF A COMPUTER BASED MANAGEMENT INFORMATION SYSTEM

SYNOPSIS OF GOALS	ACTIVITY	DEADLINE
1. Establish implementation plans	Develop a schedule for the project, conduct research and present a proposal for approval to the President.	September 1, 1973
2. Determine progress in implementation	Conduct field studies on other campus centers to determine progress made in MIS.	October 1, 1973
3. Orientate the Administrative Staff to MIS	Prepare information for workshop, conduct meeting and brief Staff.	October 15, 1973
4. Activate Task Force Committee	Select and appoint a Technical Task Force Committee for data systems, brief the committee on objectives.	October 15, 1973
5. Determine needs and goals	Investigate the present system and propose implementation plans.	November 1, 1973
6. Establish a MIS model	Design a MIS model for the College	December 1, 1973
7. Establish a coding and classification system	Set-up a total College HEGIS classification system.	January 1, 1974
8. Design MIS forms and institute procedures	Develop forms and procedures for input data into the system from all departments.	January 15, 1974
9. Accounting operation installed	Coordinate the computerization of the College accounting and personnel system.	February 1, 1974
10. Academic master schedule on the system	Coordinate with the Dean of Students office the computerization of the academic master schedule of courses.	April 1, 1974

SYNOPSIS OF GOALS	ACTIVITY	DEADLINE
11. Test the MIS model	Input all data necessary for the system, debug the model and update. Check the output for validity and accuracy.	May 1, 1974
12. Brief Staff for on-going MIS	Conduct workshops for users to maintain capability of hands on utilization of data input and output in management decision making.	June 1, 1974
13. Start Pilot MIS academic year	Implement a pre-PPBES MIS system on campus to test the MIS for future utilization for budget year 1974-75.	July 1, 1974

FLORIDA INSTITUTIONS WITH COMPATIBLE COMPUTER SYSTEMS WITH POLK COMMUNITY COLLEGE

INSTITUTION	COMPUTER MODEL	CORE	LANGUAGE	OTHER EQUIPMENT	UTILIZATION
Sarasota School District	NCRC 200	32 K	COBOL	2, NCR 633-119 tape drives 4, NCR 655-201 disk drives 1, Opscan 100, optical scanner	Total instructional and administrative
Daytona Beach Community College	NCRC 100	16 K	Cobol, Fortran Assembler	1, 633-119 tape drive 2, 655-101 disk drive 1, 2310 disk drive	Accounting instructional assignments, classroom use studies
Gulf Coast Community College	NCRC 100	16 K	NEAT 3	2, 655-101 disk drives	
Seminole Community College	NCR 100	16 K	Cobol, Fortran, NEAT 3	1, 655-101 disk drive	
Valencia Community College	NCRC 100	32 K	NEAT 3	2, 633-121 tape drives 2, 655-101 disk drives	Accounting, budget, student records, faculty records
Polk Community College	NCRC 200	32 K	NEAT 3, Fortran, Cobol	2, 633-119 tape drives 2, dual 155-101 disk drives 2, NCR KSR 260 terminals	Payroll, student records, inventory

COLLEGES HAVING IMPLEMENTED SYSTEMS OPERATIONS

COLLEGE	OPERATIONS	TYPE OF COMPUTER
St. Johns River Community College	State education reports, management cost analysis	H200, 16K Cobol, 4-204B-1 tape drives
St. Petersburg Community College	Accounting, budgets, management problem solving	3 computers, Sys 3 IBM, 16K, Cobol, Fortran Assembler, Basic
Tallahassee Community College	Management Information System and research	IBM 1130 16K, Cobol, Fortran, RPG, APL
Miami-Dade Junior College	Total systems concept on computer and administrative analysis	3 computers, IBM Sys 3 16K, Cobol, Assembler, Fortran, PL1, RPG
Central Florida Community College	Accounting, budgets and cost analysis	IBM 1130, 8K Fortran 2 disk drives
Florida Community College at Jacksonville	Institutional research	IBM 360/30 96K, Assembler 2 disk and 2 tapes

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